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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/645,753	08/24/2000	Hirofumi Takei	1232-4640	3625

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Morgan & Finnegan LLP
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EXAMINER	
VU, NGOC YEN T	
ART UNIT	PAPER NUMBER

2612

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/645,753

Applicant(s)

TAKEI, HIROFUMI

Examiner

Ngoc-Yen T. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 2, 8, 10 and 12-14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation "the image sensing period" in line 2. There is no antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 9, 13-17, 20, 21, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by the Applicant's admitted Prior Art as shown in figures 2, 8, 10, 12, 13 and 14.

Regarding claim 1, Applicant's admitted Prior Art of figures 8, 10 and 12-14 teaches an image sensing apparatus comprising:

an image sensing device (CCD) that senses an optical image of an object and converting the optical image into an image signal to be used for photographing (CCD signal quantity);

a signal forming device that forms a signal for focusing on the basis of the image signal obtained from said image sensing device (focus evaluation values a/b/c); and

a control device that emits light (fill-in light control signal) for assisting signal forming operation performed by said signal forming device (specification page 1 line 25 – page 2 line 6) and changes emitting the light (Ton and Toff) in correspondence with an image sensing period (CCD readout) of said image sensing device when said signal forming device forms the signal for focusing (see Figs. 8, 10, 13 and 14).

As to claim 2, Applicant's admitted Prior Art figures 8, 10, 13 and 14 shows that the image sensing period of said image sensing means is an image sensing period (CCD readout) for the image signal to be used for photographing.

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As to claim 3, Applicant's admitted Prior Art figures 8, 10, 13 and 14 shows that said control device emits the light (Ton and Toff) in synchronization with image sensing operation of said image sensing device.

As to claim 4, Applicant's admitted Prior Art in figures 8, 10, 13 and 14 shows that said control device repeatedly emits the light at a period of image sensing operation of said image sensing device.

As to claim 5, Applicant's admitted Prior Art in figures 8, 10, 13 shows that said period corresponds to a vertical scanning period.

As to claim 6, Applicant's admitted Prior Art in figures 8, 10, 13 and 14 shows that said period corresponds to a period of a vertical synchronizing signal.

As to claim 9, Applicant's admitted Prior Art in figures 8, 10, 13 and 14 shows that said control device changes light-emission time of the light (Ton and Toff) in accordance with the image sensing period of said image sensing device.

Regarding claim 13, Applicant's admitted Prior Art of figures 8, 10 and 12-14 teaches an image sensing apparatus comprising:

an image sensing device (CCD) that senses an optical image of an object and converting the optical image into an image signal to be used for photographing (CCD signal quantity);

a signal forming device that forms a signal for focusing on the basis of the image signal obtained from said image sensing device (focus evaluation values);and

a control device that repeatedly emits light (fill-in light control signal) for assisting signal forming operation performed by said signal forming device (specification page 1 line 25 – page 2

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line 6) at a period of image sensing operation of said image sensing device (see Figs. 8, 10, 13 and 14).

As to claim 14, subject matter claimed in claim 14 can be found in claim 2.

As to claim 15, subject matter claimed in claim 14 can be found in claim 3.

As to claim 16, subject matter claimed in claim 14 can be found in claims 4 and 5.

As to claim 17, subject matter claimed in claim 14 can be found in claims 4 and 6.

As to claim 20, Applicant's admitted Prior Art of figures 8, 10, 13 and 14 shows that said control device changes emitting the light in correspondence with an image sensing period of said image sensing device when said signal forming device forms the signal for focusing.

As to claim 21, subject matter claimed in claim 14 can be found in claim 9.

Regarding claim 25, claim 25 is a method claim corresponding to the apparatus claim 1.

Regarding claim 26, claim 26 is a method claim corresponding to the apparatus claim 13.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's admitted Prior Art.

Regarding claims 27-28, the subject matter in claims 27-28 can be found in claim 1 with the exception of a storage medium for providing a control program of an image sensing

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apparatus. Official Notice is taken that that it is well known in the art to store executable programs in a storage medium, which is loaded in an image sensing apparatus, such as an electronic camera for the purpose of facilitating downloading upgraded programs to the camera. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a storage medium for providing a control program of an image sensing apparatus so as to facilitate downloading of upgraded programs to the image sensing apparatus.

Regarding claims 29-30, the subject matter in claims 27-28 can be found in claim 1 with the exception of a storage medium for providing a control program of an image sensing apparatus. Official Notice is taken that that it is well known in the art to store executable programs in a storage medium that is loaded in an image sensing apparatus, such as an electronic camera for the purpose of facilitating downloading upgraded programs to the camera. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a storage medium for providing a control program of an image sensing apparatus so as to facilitate downloading of upgraded programs to the image sensing apparatus.

6. Claims 7-8, 11, 18-19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's admitted Prior Art in view of Koshiishi (US #5,229,856).

As to claims 7 and 18, claims 7 and 18 differs from the Applicant's admitted Prior Art in that the claim further requires that said control device does not emit the light for a predetermined period at the period of the image sensing operation of said image sensing device. However, in order to provide a quality image having reduced flicker it is well known in the art to not emit a strobe light for a predetermined period at the period of an image sensing operation of an image

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sensing device, as taught in Koshiishi '856 (see Figs. 1 & 2, col. 5 lines 10-62). In light of the teaching from Koshiishi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to not emit the light for a predetermined period at the period of the image sensing operation of said image sensing device taught in the Applicant's admitted Prior art so as to provide high quality images having reduced flicker.

As to claims **8 and 19**, claims 8 and 19 differs from the Applicant's admitted Prior Art in that the claim further requires that said control device does not emit the light at least for a predetermined period at the period of the image sensing operation of said image sensing device. However, in order to provide a quality image having reduced flicker it is well known in the art to not emit a strobe light at least for a predetermined period at the period of an image sensing operation of an image sensing device, as taught in Koshiishi '856 (see Figs. 1 & 2, col. 5 lines 10-62). In light of the teaching from Koshiishi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to not emit the light for at least a predetermined period at the period of the image sensing operation of said image sensing device taught in the Applicant's admitted Prior art so as to provide high quality images having reduced flicker.

As to claims **11 and 23**, Koshiishi teaches that said control device fixes the light-emission time of the light to a predetermined period in a case where the image sensing period of said image sensing device exceeds a predetermined period (col. 6 line 8 – col. 7 line 11).

7. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's admitted Prior Art in view of Fukuda al. (US #6,278,490).

As to claims **10 and 22**, claims 10 and 22 differs from the Applicant's admitted Prior Art in that the claim further requires that said control device increases the light emission time of the light as the image sensing period of said image sensing device increases. However, it is well known in the art to increase the light emission time of the light as the image sensing period of an image sensing device increases, as taught in Fukuda '490 (Figs. 6-7; col. 3 lines 25-34; col. 10 line 43 – col. 12 line 14). In light of the teaching from Fukuda, it would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the light emission time of the light as the image sensing period of said image sensing device increases in the Applicant's admitted Prior art so as to provide an image output having an appropriate and wide dynamic range.

8. Claims 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's admitted Prior Art in view of Yamamoto et al. (US #5,438,367).

As to claims **12 and 24**, the claims differ from the Applicant's admitted Prior Art in that the claims further require that said control device changes light-emission intensity of the light in accordance with the image sensing period of said image sensing device. The limitation is well known in the art as shown in Yamamoto. In the same field of endeavor, in figure 1 Yamamoto '367 teaches a digital camera comprising an image sensor (CCD 4; col. 4 lines 35-44), a strobe device (col. 5 lines 22-260), and a CPU 5 for driving a focus lens (3) to an in-focus position based on distance data (col. 5 lines 3-12). For the purpose of providing optimum exposure amount of the image sensor, Yamamoto further teaches an amount-of-light-emission control

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circuit (30) for controlling an amount of strobe light emission according to distance data an F-number (col. 5 line 61 – col. 6 line 51). In light of the teaching from Yamamoto, it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the light-emission intensity of the light according to the image sensing period of the image sensing device taught in the Applicant's admitted Prior art so as to provide optimum exposure for the image sensing device and providing proper image data for focusing purpose.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen T. Vu whose telephone number is 703-305-4946. The examiner can normally be reached on Mon. – Fri. from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.


NGOC-YEN VU
PRIMARY EXAMINER

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NYV
12/30/2003